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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/673,145	09/30/2003	Un Nyoung Sa	054358-5014	3831

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EXAMINER	
NGUYEN, THANH NHAN P	
ART UNIT	**PAPER NUMBER**
2871	

DATE MAILED: 01/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/673,145	SA ET AL.	
	Examiner	Art Unit	
	(Nancy) Thanh-Nhan P Nguyen	2871	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-21 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-21 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on 30 September 2003 is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (a) The invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

Claims 12-13, and 16 are rejected under 35 U.S.C. 102(a) as being anticipated by Nishiyama et al U.S. Patent Application Publication No. 2002/0140888.

Referring to claim 12, Nishiyama et al discloses a liquid crystal display device, comprising: a thin film transistor substrate (130); a pixel electrode (133) formed on the thin film transistor substrate; a color filter substrate (110); a common electrode (115) formed on the color filter substrate; a liquid crystal material (120) formed between the thin film transistor substrate and the color filter substrate; and a compensation film (116) contacting the common electrode, wherein the compensation film compensates for phase variations of light transmitted through the liquid crystal material, [see fig. 1].

Referring to claim 13, Nishiyama et al discloses a liquid crystal display device further comprising an overcoat film (114) formed between compensation film and a color filter film (113) on the color filter substrate, [see fig. 1].

Referring to claim 16, Nishiyama et al discloses the overcoat film contacts the red, green, and blue color filter layers, [see fig. 1].

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 14-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nishiyama et al in view of Nakamura et al U.S. Patent No. 6,582,862.

Referring to claims 14-15, Nishiyama et a lacks disclosure of the overcoat film is formed between red, green, and blue color filter layers of the color filter film, wherein the overcoat film contacts a black matrix formed between the red, green, and blue color filter layers.

Nakamura et al discloses of the overcoat film (8) is formed between red (7R), green (7G), and blue (7B) color filter layers of the color filter film, wherein the overcoat film contacts a black matrix (6) formed between the red, green, and blue color filter layers, [see fig. 1], for the benefit of protecting the color layer and for flattening the color filter in the case a color layer is provided in the color filter, [see col. 2, lines 4-5]. Therefore, at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to use the overcoat film

contacted red, green, blue color filter layers and black matrix for the benefit of protecting the color layer and for flattening the color filter in the case a color layer is provided in the color filter.

Claims 1-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jung et al U.S. Patent Application Publication No. 2004/0090566 in view of Arakawa et al U.S. Patent No. 6,621,550.

Referring to claim 1, Jung et al discloses a liquid crystal display device, comprising: a transparent insulating substrate (10); a gate line (22) and a gate electrode (24) on the transparent insulating substrate; a gate insulating film (30), an active layer (42), an ohmic contact layer (55, 56), source (65) and drain electrodes (66), and a data line (62) on the transparent insulating substrate; a passivation film (72) formed on the transparent insulating substrate including the source and drain electrodes and the data line, [see fig. 3].

Jung et al lacks disclosure of a compensation film formed on the passivation film; and a pixel electrode formed on at least the compensation film.

Arakawa et al discloses a compensation film (110) formed on the passivation film (12); and a pixel electrode (111) formed on at least the compensation film, [see fig. 7], for the benefit of having a clear moving image displayed, and a screen with a high contrast, [see col. 7, lines 58-59]. Therefore, at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to have a compensation film formed on the passivation film, and a pixel electrode formed on at least the compensation film for the

benefit of having a clear moving image displayed, and a screen with a high contrast.

Referring to claim 2, Jung et al discloses the pixel electrode (82) includes ITO, [see paragraph 0050].

Claim 3 is met the discussion regarding claim 1 rejection above.

Claim 4 is met the discussion regarding claim 2 rejection above.

Claims 5-11, and 17-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nishiyama et al in view of Nakamura et al as discussed above, and further in view of Abileah et al U.S. Patent No. 5,499,126.

Referring to claim 5, Nakamura et al discloses a liquid crystal display device comprising a transparent insulating substrate (5); a black matrix (6) formed on the transparent insulating substrate; a color filter layer (7R, 7G, 7B) formed on an upper surface of the black matrix, [see fig. 1].

Nakamura et al lacks disclosure of a compensation film formed on the color filter layer; and a common electrode formed on the compensation film.

Abileah et al discloses a compensation film (67, 68, 70) formed on the color filter layer (42, 44, 46); and a common electrode (64) formed on the compensation film for the benefit of eliminating color leakages and maximizing the field of view of the display, [see col. 1, lines 8-9]. Therefore, at the time the invention was made, it would have been obvious to a person of ordinary skill in

the art to have a compensation film formed on the color filter layer, and a common electrode formed on the compensation film for the benefit of eliminating color leakages and maximizing the field of view of the display.

Referring to claim 6, it was well known that using the overcoat film having a planar upper surface formed on the color filter for the benefit of protecting the color layer and for flattening the color filter in the case a color layer is provided in the color filter, [see claims 14-15 rejections above]. Therefore, the device further comprising an overcoat film having a planar upper surface formed between the color filter layer and the compensation film would have been very obvious for one of ordinary skill in the art to use for the benefit of protecting the color layer and for flattening the color filter.

Referring to claim 7, Nakamura et al discloses the common electrode includes ITO, [see col. 30, lines 58-59].

Claims 8 and 11 are met the discussion regarding claim 5 rejection above.

Claim 9 is met the discussion regarding claim 6 rejection above.

Claim 10 is met the discussion regarding claim 7 rejection above.

Referring to claim 17, Nishiyama et al lacks disclosure of a liquid crystal display device comprising a black matrix, and a compensation film formed beneath the common electrode. However, it was well known to use black matrix

formed on color filter substrate for the benefit of preventing light leakages. Therefore, at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to use black matrix formed on color filter substrate for the benefit of preventing light leakages for having high quality liquid crystal display.

Abileah discloses a compensation film (67, 68, 70) formed beneath the common electrode (64), [see fig. 19], for the benefit of eliminating color leakages and maximizing the field of view of the display, [see col. 1, lines 8-9]. Therefore, at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to have a compensation film formed beneath the common electrode, (and on color filter) for the benefit of eliminating color leakages and maximizing the field of view of the display.

Referring to claim 18, Nishiyama et al discloses the upper surface of the overcoat film (114) is planar, [see fig. 1].

Claim 19 is met the discussion regarding claim 6 rejection above.

Referring to claims 20-21, in accordance with claim 17 rejection above, Nakamura et al discloses the overcoat film (8) directly contacts the black matrix (6), [see fig. 1].

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Nishiyama et al U.S. Patent Application Publication No. 2002/0140888 discloses a compensation film contacted at least one of the pixel electrode and the common electrode.

Nakamura et al U.S. Patent No. 6,582,862 discloses the overcoat film formed between red, green, and blue color filter layers, wherein the overcoat film contacted a black matrix formed between red, green, and blue color filter layers.

Jung et al U.S. Patent Application Publication No. 2004/0090566 discloses the thin film transistor substrate structure.

Arakawa et al U.S. Patent No. 6,621,550 discloses a compensation film formed on the passivation film, and a pixel electrode formed on at least the compensation film.

Abileah et al U.S. Patent No. 5,499,126 discloses a compensation film formed on the color filter layer, and a common electrode formed on the compensation film.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to (Nancy) Thanh-Nhan P Nguyen whose telephone number is 571-272-1673. The examiner can normally be reached on M-F/9-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Kim can be reached on 571-272-2293. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

(Nancy) Thanh-Nhan P Nguyen
Examiner
Art Unit 2871

KENNETH PARKER
PRIMARY EXAMINER